

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of the Claims:**

1-35. (cancelled)

36. (original) A radiation imaging system comprising :

a movable radiation source;

a radiation detector;

a collimator comprising an adjustable geometry aperture assembly configured such that an adjustment of the aperture geometry is synchronized with the movement of said radiation source and coordinated with the radiation source position so as to limit the incident radiation to a predetermined exposure area at said detector.

37. (original) The imaging system of Claim 36, wherein said aperture assembly is configured for adjusting at least one of the position of the aperture and the shape of the aperture.

38. (original) The imaging system of Claim 36, further comprising a collimator assembly comprising a collimator positioning apparatus for positioning said collimator.

39. (original) The imaging system of Claim 36, wherein said aperture assembly comprises a plurality of movable sides.

40. (original) The imaging system of Claim 36, wherein said aperture assembly comprises at least one movable side.

41. (original) The imaging system of Claim 36, wherein said aperture assembly comprises multiple independently positionable sections with different boundary shapes.

42. (original) The imaging system of Claim 41, wherein said multiple sections have linear boundaries.

43. (original) The imaging system of Claim 39, wherein said plurality of sides comprise rotationally and translationally movable sides.

44. (original) A method for radiation imaging, comprising:

moving a radiation source in a plurality of radiation source positions;

adjusting an aperture by synchronizing the aperture geometry adjustment with the movement of said radiation source and coordinating at least one of the position and the shape of said aperture with the respective position of said radiation source such that a radiation beam emanating from said radiation source is collimated to limit the incident radiation to a predetermined exposure area; and

detecting the radiation beam on a radiation detector.

**Amendments to the Drawings:**

The attached sheets of drawings include changes to Fig. 10 and a new Fig. 11. Sheet 9 includes Fig. 10 and replaces the original sheet 9. Sheet 10 is a new sheet including new Fig. 11. Sheets 1-8 are additionally included to renumber them (1/10 to 8/10) based on the new total number of 10 sheets.

Attachment: Replacement Sheets